USGS science for a changing world

GSN

USAID FROM THE AMERICAN PEOPLE

M 5.9, COSTA RICA

Origin Time: Wed 2009-03-11 21:03:59 UTC
Location: 8.51˚N 83.24˚W Depth: 17 km

PAGER
Version 2
Created: 5 hrs, 35 mins after earthquake

Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k = x1000)		- -*	2,093k*	1,991k	132k	5k	0	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		**I**	**II-III**	**IV**	**V**	**VI**	**VII**	**VIII**	**IX**	**X+**
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	**Resistant Structures**	none	none	none	V. Light	Light	Moderate	Moderate/Heavy	Heavy	V. Heavy
	Vulnerable Structures	none	none	none	Light	Moderate	Moderate/Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure

population per ~1 sq. km from Landscan 2006

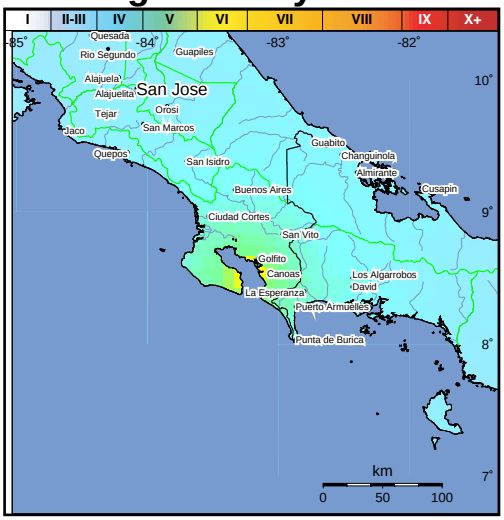
Selected City Exposure

MMI	City	Population
V	**Golfito**	**6k**
V	Corredor	7k
V	Finca Blanco Numero Uno	1k
V	Progreso	2k
V	Finca Corredor	1k
V	**Puerto Armuelles**	**18k**
IV	**David**	**82k**
IV	Puerto Limon	63k
IV	**Alajuela**	**47k**
IV	**San Jose**	**335k**
III	San Francisco	55k

bold cities appear on map (k = x1000)

Shaking Intensity

MMI



Overall, the population in this region resides in structures that are vulnerable to earthquake shaking, though some resistant structures exist. A magnitude 6.5 earthquake occurred in the Costa Rica region 286 km northwest of the location of this earthquake on April 14, 1973 (UTC), with estimated population exposures of 9,000 at intensity VIII and 155,000 at intensity VII, resulting in an estimated 26 fatalities. On April 22, 1991 (UTC), a magnitude 7.6 earthquake and tsunami occurred near the Valle de la Estrella, Costa Rica, region 118 km north of the location of this earthquake, with estimated population exposures of 213,000 at intensity VII and 1,810,000 at intensity VI, resulting in an estimated 75 fatalities. Recent earthquakes in this area have caused, landslides and liquefaction that may have contributed to losses.

This information was automatically generated and has not been reviewed by a seismologist.